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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,778	11/09/2001	Senthil Sengodan	05288.00025	5639
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BANNER & WITCOFF 1001 G STREET N W SUITE 1100 WASHINGTON, DC 20001			PEACHES, RANDY	
			ART UNIT	PAPER NUMBER
			2686	

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/986,778	Applicant(s) SENGODAN ET AL.	
	Examiner Randy Peaches	Art Unit 2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-18, 20-31, 33 and 34 is/are rejected.
- 7) ☒ Claim(s) 6, 19, 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11/9/2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION*****Drawings***

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application ***because the submitted drawings are hand written and are not understandable***. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. ***Claim 1-4, 9-11, 29 and 34*** are rejected under 35 U.S.C. 102(e) as being anticipated by Willars et al. (U.S. Patent Publication Number 2003/0013443 A1).

Regarding ***claims 1 and 29***, Willars et al teaches of a method of handing off a user equipment (UE), which reads on claim "mobile terminal", from a Serving Network, which

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reads on claim "first network", served by a Serving Radio Network Controller (SRNC), which reads on claim "first access device", to a Target or Drift Network, which reads on claim "second network", served by a Target/Drift Radio Network Controller (DRNC), which reads on claim "second access device", comprising the steps of:

- sending an authorization inquiry from the said SRNC to the said DRNC, that includes a IMSI identifying the said UE. See paragraphs [0030 and 0063];
- querying a HLR, which reads on claim "database", maintained by a said Serving Network associated with the said UE to determine whether the said UE is authorized to be handed off to the said DRNC. See paragraphs [0066-0067];
- in response to receiving the allowed list, the said DRNC responds by sending a filtered list of DRNC's, which in turn is received by the said SRNC which communicates this information to the UE, which reads on claim "determining that the mobile terminal is authorized to be handed off to the second access device, performing a handoff operation from the first access device to the second access device". See paragraph [0066]; and
- in response to determining that the mobile terminal is not authorized to be handed off to the second access device, inhibiting the handoff operation from the first access device to the second access device.

Regarding **claim 2**, Willars et al teaches of method of **claim 1**, wherein step (3) comprises the step of transferring context information from the said SRNC to the DRNC. See paragraph [0068].

Regarding **claims 3 and 34**, Willars et al teaches of a method of **claims 1 and 29**, wherein steps (1) through (4) are performed without allocating any radio frequency resources of the DRNC to communicate with the UE until after it is determined that the UE is authorized to be handed off to the DRNC. See paragraph [0011].

Regarding **claim 4**, Willars et al teaches of a method of **claim 1**, wherein step (2) comprises the step of querying the database on the basis of a list of DRNC's that are authorized to accept handoffs from the UE. See paragraph [0066-0067].

Regarding **claim 9**, Willars et al teaches of a method of **claim 1**, wherein steps (1) to (4) are conducted between said RNC's that use same access technology. See paragraph [0048].

Regarding **claim 10**, according to **claim 1**, Willars et al. teaches in paragraph [0023] wherein between said RNC's, heterogeneous access technologies are used.

Regarding **claim 11**, Willars et al teaches of a method of **claim 1**, wherein step (2) comprises the steps of:

- sending the authorization inquiry to a MSC, which reads on claim "administrative server" associated with the said Target or Drift Network. See paragraph [0067];  
and

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- sending the authorization inquiry from the said MSC to a said SRNC that accesses the database. See paragraph [0067].

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. ***Claims 5 and 31*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Chambert (U.S. Patent Number 5,499,387).

Regarding ***claims 5 and 31***, Willars et al., according to ***claims 1 and 29***, fails to disclose wherein the step of querying the database to determine authorization based on a time of day.

Chambert teaches in column 3 lines 54-64, where time monitoring unit is used to prevent handoff to neighboring cells during a certain time.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) to include Chambert (U.S. Patent Number 5,499,387 in order restrict handover to certain cells during a time when there are nominally higher capacity.

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3. **Claims 7, 8, 30 and 33** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Kennedy, III et al. (U.S. Patent Number 5,966,658).

Regarding **claims 7, 8, 30 and 33**, according to **claims 1 and 29**, Willars et al. fails to disclose wherein the step of querying the database on the basis of dynamic loading conditions and such that authorization is dependent upon dynamic loading conditions.

Kennedy, III et al. teaches in column 5 lines 51-67 wherein the connection of a communication path during handoff is contingent upon the characteristics of transmission time current load, speed, propagation delay, etc.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) to include Kennedy, III et al. (U.S. Patent Number 5,966,658) in order to prevent the handoff process from over burdening the said system when candidates for handoff are processed

4. **Claims 12 and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Igarashi et al. (U.S. Patent Publication Number 2001/0053694 A1).



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Regarding **claims 12 and 13**, according to **claim 1**, Willars et al. fails to clearly disclose wherein steps (a) and (b) are performed using the DIAMETER protocol and SIP protocol.

Igarashi et al teaches in paragraphs [0094, 0104] wherein the mobile node is able to transport information via various protocols, e.g. SIP and DIAMETER protocol, to facilitate the functions of Authentication, Authorization and Accounting.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) to include Igarashi et al. (U.S. Patent Publication Number 2001/0053694 A1) in order to comply with Internet standards of transporting information via IP.

5. **Claims 14-17, 22-26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) in view of Funato et al. (U.S. Patent Publication Number 2003/0087646 A1).

Regarding claim 14, Willars et al teaches of a method of handing off a user equipment (UE), which reads on claim "mobile terminal", from a Serving Network, which reads on claim "first network", served by a Serving Radio Network Controller (SRNC), which reads on claim "first access device", to a Target or Drift Network, which reads on claim "second network", served by a Target/Drift Radio Network Controller (DRNC), which reads on claim "second access device", comprising the steps of:

- sending an authorization inquiry from the said SRNC to the said DRNC, that includes a IMSI identifying the said UE. See paragraphs [0030 and 0063];
- querying a HLR, which reads on claim “database”, maintained by a said Serving Network associated with the said UE to determine whether the said UE is authorized to be handed off to the said DRNC. See paragraphs [0066-0067];
- in response to receiving the allowed list, the said DRNC responds by sending a filtered list of DRNC’s, which in turn is received by the said SRNC which communicates this information to the UE, which reads on claim “determining that the mobile terminal is authorized to be handed off to the second access device, performing a handoff operation from the first access device to the second access device”. See paragraph [0066]; and
- in response to determining that the mobile terminal is not authorized to be handed off to the second access device, inhibiting the handoff operation from the first access device to the second access device.

However, Willars et al fails to clearly disclose wherein the said equipment performing the handoff process is an access router.

Funato et al teaches in paragraphs [0036-0039], wherein the system includes a plurality of access routers (20), used to forward data between networks.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) to include Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in order to transfer the functionality of mediating the

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handover processing to the access router which in turn optimizes the system by preventing the use to radio resources for handoffs.

Regarding **claim 15**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, Willars et al teaches wherein step (3) comprises the step of transferring context information from the said SRNC to the DRNC. See paragraph [0068].

Regarding **claim 16**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, Willars et al teaches wherein steps (1) through (4) are performed without allocating any radio frequency resources of the DRNC to communicate with the UE until after it is determined that the UE is authorized to be handed off to the DRNC. See paragraph [0011].

Regarding **claim 17**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, Willars et al teaches of a method wherein step (2) comprises the step of querying the database on

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the basis of a list of DRNC's that are authorized to accept handoffs from the UE. See paragraph [0066-0067].

Regarding **claim 22**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, Funato et al. discloses in paragraph [0037] wherein the access router serves access devices, which reads on claim "mobile terminals", using Internet Protocol.

Regarding **claim 23**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, Willars et al. teaches in paragraph [0023] wherein between said RNC's, heterogeneous access technologies are used.

Regarding **claim 24**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 23**, Willars et al. teaches in paragraph [0010] wherein the system uses GPRS technology.

Regarding **claim 25**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number

2003/0087646 A1) are made, the combination according to **claim 14**, Willars et al teaches wherein steps (1) to (4) are conducted between said RNC's that use same access technology. See paragraph [0048].

Regarding **claim 26**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, Willars et al teaches wherein step (2) comprises the step of sending an authorization inquiry to a said Serving Network associated with the said UE. See paragraphs [0066-0067].

6. **Claim 18** is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in view of Chambert (U.S. Patent Number 5,499,387).

Regarding **claim 18**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, fails to clearly disclose wherein the step of querying the database to determine authorization based on a time of day.

Chambert teaches in column 3 lines 54-64, where time monitoring unit is used to prevent handoff to neighboring cells during a certain time.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) to include Chambert (U.S. Patent Number 5,499,387 in order restrict handover to certain cells during a time when there are nominally higher capacity.

7. **Claims 20 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in view of Kennedy, III et al. (U.S. Patent Number 5,966,658).

Regarding **claims 20 and 21**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 14**, fails to disclose wherein the step of querying the database on the basis of dynamic loading conditions and such that authorization is dependent upon dynamic loading conditions.

Kennedy, III et al. teaches in column 5 lines 51-67 wherein the connection of a communication path during handoff is contingent upon the characteristics of transmission time current load, speed, propagation delay, etc.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of Willars et al. (U.S. Patent

Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) to include Kennedy, III et al. (U.S. Patent Number 5,966,658) in order to prevent the handoff process from over burdening the said system when candidates for handoff are processed

8. **Claims 27 and 28** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) in view of Igarashi et al. (U.S. Patent Publication Number 2001/0053694 A1).

Regarding **claims 27 and 28**, as the combination of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) are made, the combination according to **claim 26**, fails to clearly disclose wherein steps (a) and (b) are performed using the DIAMETER protocol and SIP protocol.

Igarashi et al teaches in paragraphs [0094, 0104] wherein the mobile node is able to transport information via various protocols, e.g. SIP and DIAMETER protocol, to facilitate the functions of Authentication, Authorization and Accounting.

Therefore, at the time of the invention it would have been obvious to a person of ordinary skilled in the art to modify the combined teachings of Willars et al. (U.S. Patent Publication Number 2003/0013443 A1) and Funato et al. (U.S. Patent Publication Number 2003/0087646 A1) to include Igarashi et al. (U.S. Patent Publication Number

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2001/0053694 A1) in order to comply with Internet standards of transporting information via IP.

### ***Allowable Subject Matter***

**Claims 6, 19 and 32** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding **claims 6, 19 and 32** the method of **claim 1, 14 and 29**, wherein step (2) comprises the step of receiving a result corresponding to querying the database on the basis of a membership plan associated with a subscriber of the mobile terminal.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Randy Peaches whose telephone number is (703) 305-8993. The examiner can normally be reached on Monday - Friday.

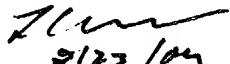
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Randy Peaches  
August 23, 2004

  
8/23/04  
LESTER G. KINCAID  
PRIMARY EXAMINER